ABSTRACT

An apparatus is disclosed for allocating processing resources, such as instruction execution which can be measured in MIPs or memory capacity, or other resources of a processor itself or resources used in the process of performing operations, such as memory resources, busses, drivers and the like, to functions in a queue waiting to be executed. This apparatus includes a capacity determining device for determining an amount of the processor resource available to be assigned, a load determining device for determining an estimate of an amount of the resource needed for each function waiting in the queue to execute, a prioritization device for prioritizing each of the functions in the queue waiting to be executed, and an allocating device, which receives information from the capacity determining device, the load determining device, and the prioritization device, for allocating the available resource to the functions based on a hierarchical priority scheme.

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